

In the Claims:

Please amend the claims as follows:

1-42 (cancelled)

43. (currently amended) The method according to ~~claim 42, further comprising:~~
~~selecting~~ claim 81, wherein the primary color candidates ~~to~~ correspond to the strongest spectral
bands or lines of light emitted by a fluorescent lamp.

44. (currently amended) The method according to claim 43, ~~further comprising:~~
~~selecting~~ wherein the primary color candidates ~~to~~ correspond substantially to the wavelengths of
437 nm, 490 nm, 545 nm and 615 nm.

45. (currently amended) The method according to ~~claim 42, further comprising:~~
~~selecting~~ claim 81, wherein the primary color candidates ~~to~~ correspond to spectral bands or lines
distinguishable in the illumination implemented by means of semiconductor emitters.

46. (cancelled)

47. (currently amended) The method according to claim 46, further comprising:
forming a ~~diffractive~~ basic area unit ~~on the substrate in order to reproduce a target color,~~
~~said basic area unit being formed of~~ comprising the elementary gratings ~~corresponding to the~~

~~primary colors selected for said target color.~~

48. (cancelled)

49. (currently amended) The method according to claim 47, further comprising:

forming the basic area unit such that the target color is produced in the predetermined illumination by additively mixing the two or more diffractively produced primary colors with a color of the substrate ~~taking into account the color of the substrate when specifying said primary color mixing ratio.~~

50. (previously presented) The method according to claim 47, wherein said basic area unit is formed of the elementary gratings as an array-like pixelated structure, in which an individual elementary grating represents an individual pixel.

51. (currently amended) The method according to claim 50, wherein the ~~dimensions of said basic area unit in all directions along the plane of the substrate are selected to be~~ is substantially equal rectangular.

52. (currently amended) The method according to claim 47, wherein said basic area unit is formed of the elementary gratings as a banded pixelated structure.

53-56 (cancelled)

57. (withdrawn) A diffractive component, comprising:

at least one diffractive basic area unit formed on a substrate, which basic area unit is arranged to create a target color by additively mixing together two or more diffractively produced primary colors,

said basic area unit comprising at least two different diffractive elementary gratings producing different primary colors in at least one common detection direction,

the primary colors being selected by using a luminance achieved with them in application-specific illumination conditions as a selection criterion,

an area ratio of said elementary gratings corresponding to a mixing ratio of the selected primary colors, and said target color being provided by additively mixing said primary colors at said mixing ratio.

58. (withdrawn) The diffractive component according to claim 57, wherein the primary colors corresponding to the elementary gratings contained in at least one basic area unit contained in the component are selected from a group of primary color candidates, which primary color candidates correspond to spectral features distinguishable in an application-specific illumination comprising a discrete spectrum.

59. (withdrawn) The diffractive component according to claim 58, wherein said primary color candidates correspond to the strongest spectral bands or lines emitted by a fluorescent lamp.

60. (withdrawn) The diffractive component according to claim 59, wherein the primary

color candidates correspond substantially to the wavelengths of 437 nm, 490 nm, 545 nm and 615 nm.

61. (withdrawn) The diffractive component according to claim 58, wherein said primary color candidates correspond to the spectral bands or lines distinguishable in an illumination implemented with semiconductor emitters.

62. (withdrawn) The diffractive component according to claim 57, wherein the area ratios of the elementary gratings have been determined by taking into consideration the color of the substrate.

63. (withdrawn) The diffractive component according to claim 57, wherein said basic area unit producing the target color is formed of the elementary gratings as a array-like pixelated structure, in which an individual elementary grating represents an individual pixel.

64. (withdrawn) The diffractive component according to claim 63, wherein the dimensions of said basic area unit in all directions along the plane of the substrate are substantially equal.

65. (withdrawn) The diffractive component according to claim 57, wherein said basic area unit producing the target color is formed of elementary gratings as a banded pixelated structure.

66. (withdrawn) The diffractive component according to claim 65, wherein a dimension of said basic area unit in at least one direction along the plane of the substrate is selected to be substantially greater than the dimensions of the basic area unit in the other directions along the plane of the substrate.

67. (withdrawn) The diffractive component according to claim 57, wherein said elementary gratings are implemented as surface grating structures.

68. (withdrawn) The diffractive component according to claim 57, wherein the profiles of the gratings of said elementary gratings are selected from a group consisting of a binary profile, a sine-form profile, a triangle profile, and combinations thereof.

69. (withdrawn) The diffractive component according to claim 57, wherein the viewing angle α of the elementary gratings has been arranged to be 30° in a situation in which the illumination takes place substantially in the direction of the normal of the plane of the substrate.

70. (withdrawn) The diffractive component according to claim 57, wherein said elementary gratings have been formed on the substrate by embossing.

71. (withdrawn) The diffractive component according to claim 70, wherein embossing has been performed as sheet printing.

72. (withdrawn) The diffractive component according to claim 57, wherein said

substrate is formed of one or more materials selected from a group consisting of plastic, paper, cardboard, glass, textile, metal, ceramics, lacquer, paint, and printing ink.

73. (withdrawn) A product adapted to provide one or more visual and diffractively produced color effects, said product comprising:

at least one diffractive component, which diffractive component in turn comprises at least one diffractive basic area unit formed on a substrate, which basic area unit is arranged to create a target color by additively mixing together two or more diffractively produced primary colors, said basic area unit comprising at least two different diffractive elementary gratings producing different primary colors in at least one common detection direction, the primary colors being selected by using a luminance achieved with them in application-specific illumination conditions as a selection criterion, an area ratio of said elementary gratings corresponding to a mixing ratio of the selected primary colors, and said target color being provided by additively mixing said primary colors at said mixing ratio.

74. (withdrawn) The product according to claim 73, wherein the product is packing material.

75. (withdrawn) The product according to claim 73, wherein the product is a printed product.

76. (withdrawn) The product according to claim 73, wherein the product is manufactured of a substantially transparent material.

77. (withdrawn) The product according to claim 73, wherein the basic material of said product functions at the same time as the substrate of said one or more diffractive component.

78. (withdrawn) The product according to claim 73, wherein said one or more diffractive components form an image as an effect which has one or more colors.

79. (withdrawn) The product according to claim 73, wherein said one or more diffractive components form letters as an effect which has one or more colors.

80. (withdrawn) The product according to claim 73, wherein said one or more diffractive components form a color specimen representing the target color specified by a diffractive color chart.

81. (new) A method, comprising:

selecting a target color; and

forming two or more adjacent diffractive elementary gratings on a substrate according to controlled area ratio such that the elementary gratings are together arranged to produce the target color by additively mixing two or more primary colors, wherei the target color is detectable in a predetermined viewing direction in predetermined illumination, and wherein each elementary grating is arranged to diffractively produce one of said primary colors in the predetermined viewing direction in the predetermined illumination, and wherein the primary colors produced by the elementary gratings are selected from a group of primary color candidates corresponding to

spectral peaks of illuminating light in the predetermined illumination.

82. (new) The method according to claim 81, wherein a color chart contains information for producing the target color.

82. (new) The method according to claim 47, wherein the substrate is transparent, a color of a background is visible through the transparent substrate, and the basic area unit is formed such that the target color is produced in the predetermined illumination by additively mixing the two or more diffractively produced primary colors with a color of the background visible through the transparent substrate.

83. (new) The method according to claim 41, wherein the profile of an elementary grating is selected from a group consisting of a binary profile, a sinusoidal profile, and a triangle profile.

84. (new) The method according to claim 41, wherein said elementary gratings are formed on the substrate by embossing.

85. (new) The method according to claim 84, wherein the embossing is performed as a roll-to-roll process.

86. (new) The method according to claim 84 comprising providing control data for manufacturing a printing block by lithography such that a basic area unit, when embossed on the

substrate by using the printing block reproduces the selected target color.